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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/686,574	10/11/2000	Jack Lau	4522/8	4748

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EXAMINER	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	09/686,574	LAU ET AL.	
	Examiner	Art Unit	
	Michael N. Opsasnick	2626	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *18 October 2007*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *5,8-14,17,19,22,24,26-28,32-34 and 61-64* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *5,8-14,17,19,22,24,26-28,32-34 and 61-64* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 5,8-14,17,19,22,24,26-28,32-34,61-64 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fiedler (6804638) in view of Dye (6370631).

As per claims 5,8,17,22,61-64, Fiedler (6804638) teaches a method for storing sets of digital signals in a compressed format in a computer disc storage device representing audio segments (as storing audio segments → col. 4 lines 19-30; onto a hard drive → col. 3 lines 1-7) comprising:

"transferring a plurality sets of data...in a first memory device.....stored in an uncompressed format" as exchanging uncompressed/compressed data comprises of a memory buffer structure storing audio/pixel information (col. 4 lines 22-43), wherein the memory buffer structure contains a plurality of memory banks (acquisition buffers – abstract, output buffers – col. 11 lines 58-65; and the like). The swapping of data from these buffers is detailed in col. 6 line 55 – col. 7 line 19 of Fielder.

"stored in an uncompressed format....first memory" as storing the captured data (col. 7 lines 23-30);

"compressing each set of signals" as retrieving stored data and compressing (col. 7 lines 42-47);

"storing each set of signals....compressed format" as re-storing the compressed data for the purpose of creating more memory space for the newly recorded uncompressed data (col. 7 lines 34-40);

and retrieving stored signals for compression after the storage of such uncompressed data (Fiedler (6804638), as retrieving the captured data → col. 7 lines 38-47). retrieving and compression of sets of signals one set at a time (Fiedler (6804638), as reserving memory to perform recording, storage, and compression, one set at a time → col. 7 lines 10-22)

In summary, Fiedler (6804638) teaches the use of these memory structures for storing differently formatted/compressed data, in fact, teaches the transfer of uncompressed data from one memory structure to another; however, Fiedler (6804638) does not explicitly teach compressing the transferred uncompressed data and re-storing the newly compressed data within that memory structure. Dye (6370631), however, teaches a memory controller (IMC) (Figs. 7-15) that includes a compression-decompression algorithm (col. 8 lines 15-24; col. 9 lines 4-19; col. 9 lines 4-19) that performs compression of decompressed information to the memory area (Fig. 12, taking normal data and compressing to compressed data) as well as compression of normal data from the cpu cache to compressed data of disk (Fig. 15), as well as decompression of

compressed memory (Fig. 11). Therefore, it would have been obvious to one of ordinary skill in the art of data storage to modify the memory structure of Fiedler with an IMC device as taught by Dye (6370631) because it would advantageously improve memory access times, as well as reducing the burden the CPU (Dye (6370631), col. 9 lines 19-26).

As per claims 9-11, the combination of Fiedler (6804638) in view of Dye (6370631) teaches storing the differently compressed signals into different memory devices, including a hard disc (Fiedler (6804638)col. 3 lines 1-12).

As per claims 12,19,26, the combination of Fiedler (6804638) in view of Dye (6370631) teaches the use of old and well known compression algorithms (Fiedler (6804638), col. 7 lines 42-43, which would include the MP3 format).

As per claims 13,14, the combination of Fiedler (6804638) in view of Dye (6370631) teaches the compressed stored signals as audio signals (Fiedler (6804638), col. 4 lines 30-35).

As per claim 22, Fiedler (6804638) teaches a method for storing sets of digital signals in a compressed format in a computer disc storage device representing audio segments (as storing audio segments → col. 4 lines 19-30; onto a hard drive → col. 3 lines 1-7) comprising:

"transferring a plurality sets of data…in a first memory device…..stored in an uncompressed format" as exchanging uncompressed/compressed data comprises of a memory buffer structure storing audio/pixel information (col. 4 lines 22-43), wherein the

memory buffer structure contains a plurality of memory banks (acquisition buffers – abstract, output buffers – col. 11 lines 58-65; and the like). The swapping of data from these buffers is detailed in col. 6 line 55 – col. 7 line 19 of Fielder.

"compressing each set of signals" as retrieving stored data and compressing (col. 7 lines 42-47);

"stored in an uncompressed format....first memory" as storing the captured data (col. 7 lines 23-30);

"storing each set of signals....compressed format" as re-storing the compressed data for the purpose of creating more memory space for the newly recorded uncompressed data (col. 7 lines 34-40);

and retrieving stored signals for compression after the storage of such uncompressed data (Fiedler (6804638), as retrieving the captured data → col. 7 lines 38-42). retrieving and compression of sets of signals one set at a time (Fiedler (6804638), as reserving memory to perform recording, storage, and compression, one set at a time → col. 78 lines 10-22);

using a predetermined priority in retrieving audio tracks to be played, with alternate use of compressing/decompressing - Fiedler (6804638), (as deferring storage (including compression) so as to allow the user to cancel data capture → col. 7 lines 26-30; Fiedler's array of acquisition buffer records can be construed as an audio track – col. 4 lines 33-60; col. 5 lines 10-46 col. 10 lines 1-30;col. 30 lines 1-10). Examiner notes that the prioritization of the data in Fielder is based on type of information in the buffer when the buffer is close to full, and if full, the data is then compressed as it is recorded on disk.

This correlation between audio tracks and the memory buffer of Fielder follows for claims 24,26,27 as well.

Fiedler (6804638) teaches the use of these memory structures for storing differently formatted/compressed data, in fact, teaches the transfer of uncompressed data from one memory structure to another; however, Fiedler (6804638) does not explicitly teach compressing the transferred uncompressed data and re-storing the newly compressed data within that memory structure. Dye (6370631), however, teaches a memory controller (IMC) (Figs. 7-15) that includes a compression-decompression algorithm (col. 8 lines 15-24; col. 9 lines 4-19) that performs compression of decompressed information to the memory area (Fig. 12, taking normal data and compressing to compressed data) as well as compression of normal data from the cpu cache to compressed data of disk (Fig. 15), as well as decompression of compressed memory (Fig. 11). Therefore, it would have been obvious to one of ordinary skill in the art of data storage to modify the memory structure of Fiedler with an IMC device as taught by Dye (6370631) because it would advantageously improve memory access times, as well as reducing the burden the CPU (Dye (6370631), col. 9 lines 19-26). The combination of Fielder in view of Dye, with respect to prioritization, now teaches a priority to store and remove the data from the buffer, going through a storage/compression, and decompression when removed from the memory structure of Dye.

As per claim 24, the combination of Fiedler (6804638) in view of Dye (6370631) teaches recording (compression) occurs at user's request, but cannot be performed during playback (Fiedler (6804638), decompression) → col. 8 line 45 – col. 9 line 27.

As per claim 27, the combination of Fiedler (6804638) in view of Dye (6370631) teaches the uncompressed retrieval and compression, of a set of signals, one set at a time (Fiedler (6804638), as alternating recording/playback -- this technique includes the compression of the stored uncompressed data → col. 6 lines 55-65).

System claims 28,32-34 are similar in scope to the method claims 17,19,22, implemented on a processor (col. 4 lines 20-35; Fig. 1), and are rejected under the same rationale.

Response to Arguments

3. Applicant's arguments filed 10/18/07 have been considered but are not persuasive. As per applicants on page 12 of the response, examiner notes that the office action is now clear as to the reference to Fiedler to teach compression/uncompression and rotation into a memory buffer. As per the arguments on the top of page 13 of the response, examiner argues that it is the introduction of the Dye reference, and hence the combination of Fiedler in view of Dye, that teaches replacement of uncompresses signals by compressed signals. As to the arguments against Fiedler not teaching previously recorded data, examiner disagrees and points to Fiedler teaching permanent storage (col. 4 lines 5-10; col. 7 lines 25-30). As per the arguments on page

14 of the response, examiner notes the use of Dye's (6370631) memory structure because it improve memory access times, as well as reducing the burden the CPU (Dye (6370631), col. 9 lines 19-26). With respect to the arguments against prioritization in Fiedler, examiner argues that Fiedler priority signal is shown in figs. 7-10, and the combination of Fiedler in view of Dye places priority on data swapping such that access times are improved (col. 9 lines 19-26; col. 8 lines 15-24; col. 9 lines 9-14). Lastly, examiner also notes the Miller et al reference teaching storage and retrieval of compressed/uncompressed/compressed-uncompressed data in a memory structure.

Conclusion

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Please see the related art listed on the PTO-892 form.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Opsasnick, telephone number (571)272-7623, who is available Tuesday-Thursday, 9am-4pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Richemond Dorvil, can be reached at (571)272-7602. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

MICHAEL OPSASNICK
PRIMARY EXAMINER

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1/6/08